

Claims

- [c1] 1.A method for dynamically adjusting frequency of a central processing unit, comprising:
providing a translation table, comprising a plurality of layers, each of the layers defining a set of a plurality of front-end bus operation frequencies and a corresponding range of a central processing unit usage rate;
obtaining a current usage rate of the central processing unit; and
comparing the current usage rate with entries in the translation table, adjusting one of the front-end frequencies to a corresponding layer, so as to locate the current usage rate in the corresponding range of the central processing unit usage rate.
- [c2] 2.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein the translation table is built according to the following steps:
detecting whether the method is firstly performing on a machine;
progressively tuning maximum of a clocking range for a processor of the machine; and
establishing a plurality of layers according to the clock-

ing range, wherein the translation table is defined for the front-end operation frequency of the central processing unit vs. a usage rate.

- [c3] 3.The method for dynamically adjusting central processing unit frequency as recited in claim 2, wherein a frequency down-conversion is performed in the translation table when battery power is supplied, and a frequency up-conversions is performed in the translation table when external power is supplied.
- [c4] 4.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein an interval between the layers is one million hertz.
- [c5] 5.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein the obtaining the current usage rate is performed by measuring with software.
- [c6] 6.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein the obtaining the current usage rate is performed by measuring with operation system.
- [c7] 7.The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein when comparing the current usage rate and the translation ta-

ble, the layer is raised to an upper layer if the current usage rate is higher than the current layer, so as to up-convert the front-end bus operation frequency.

[c8] 8. The method for dynamically adjusting central processing unit frequency as recited in claim 1, wherein when comparing the current usage rate and the translation table, the layer is dropped to a lower layer if the current usage rate is lower than the current layer, so as to down-convert the front-end bus operation frequency.